VOLUME CONTENTS Volume 28, 1998

Vol. 28 No. 1 February 1998

DAVID P. SUMMERS and NARCINDA LERNER / Ammonia from Iron(II) Reduction of Nitrite and the Strecker Synthesis: Do Iron(II) and Cyanide Interfere with Each Other? 1–11

GEOFFREY ZUBAY / Studies on the Lead-Catalyzed Synthesis of Aldopentoses 13–26

JOHN F. NEUMER, MICHAEL D. GORDON, CHARLES N. McEWEN, PATRICIA M. PEACOCK, STEVEN A. HILL, RICHARD G. McKAY, JOSEPH LAZAR, JAMES R. VALENTINE, FRANK J. VAN LENTEN and ANTHONY FORIS / New Polyazaporphine Chemistry for the Origin of Life 27–45

RIHE LIU and LESLIE E. ORGEL / Polymerization of β-Amino Acids in Aqueous Solution 47–60

JACQUES TAILLADES, ISABELLE BEUZELIN, LAURENCE GARREL, VLADO TABACIK, CATHERINE BIED and AUGUSTE COMMEYRAS / N-Carbamoyl-α-Amino Acids Rather than Free α-Amino Acids Formation in the Primitive Hydrosphere: A Novel Proposal for the Emergence of Prebiotic Peptides 61–77

YUTTANA SUWANNACHOT and BERND M. RODE / Catalysis of Dialanine Formation by Glycine in the Salt-Induced Peptide Formation Reaction 79–90

LESLIE E. ORGEL / The Origin of Life – How Long Did it Take? 91–96

J. TOHÁ and M.A. SOTO / On the Determination of Internal Nodes of an Evolutionary Dendrogram 97–103

Vol. 28 No. 2 April 1998

Special Issue Dedicated to the Memory of Cyril Ponnamperuma

Guest Editor
Rafael Navarro-González

RAFAEL NAVARRO-GONZÁLEZ / In Memoriam 105–108

A. ROMERO and R. NAVARRO-GONZÁLEZ / Cyril Ponnamperuma and the Origin of Life: A Bibliography 109–121

MITCHELL K. HOBISH / Studies on Order in Prebiological Systems at the Laboratory of Chemical Evolution 123–130

RAFAEL NAVARRO-GONZÁLEZ, ALFREDO ROMERO and YASUHIRO HONDA / Power Measurements of Spark Discharge Experiments 131–153

KENSEI KOBAYASHI, TAKEO KANEKO, TAKESHI SAITO and TAIRO OSHIMA / Amino Acid Formaton in Gas Mixtures by High Energy Particle Irradiation 155–165

VLADIMIR A. BASIUK, RAFAEL NAVARRO-GONZÁLES and ELENA V. BASIUK / Behavior of Amino Acids when Volatilized in the Presence of Silica Gel and Pulverized Basaltic Lava 167–193

PATRICE COLL, DAVID COSCIA, MARIE-CLAIRE GAZEAU, LIONEL GUEZ and FRANÇOIS RAULIN / Review and Latest Results of Laboratory Investigations of Titan's Aerosols 195–213

JULIAN CHELA-FLORES / First Steps in Eukaryogenesis: Physical Phenomena in the Origin and Evolution of Chromosome Structure 215–225

Vol. 28 No. 3 June 1998

LESLIE E. ORGEL / Polymerization on the Rocks: Theoretical Introduction 227–234

AUBREY R. HILL JR., CHRISTOF BÖHLER and LESLIE E. ORGEL / Polymerization on the Rocks: Negatively-Charged α-Amino Acids 235–243

RIHE LIU and LESLIE E. ORGEL / Polymerization on the Rocks: β-Amino Acids and Arginine 245–257

ARTHUR L. WEBER / Prebiotic Amino Acid Thioester Synthesis: Thiol-Dependent Amino Acid Synthesis from Formose Substrates (Formaldehyde and Glycolaldehyde) and Ammonia 259–270

R.M. DE GRAAF, J. VISSCHER and ALAN W. SCHWARTZ / Prebiotic Chemistry of Phosphonic Acids: Products Derived from Phosphonoacetaldehyde in the Presence of Formaldehyde 271–282

STEPHEN J. SOWERBY and WOLFGANG M. HECKL / The Role of Self-Assembled Monolayers of the Purine and Pyrimidine Bases in the Emergence of Life 283–310

TIMOTHY A. KRAL, KEITH M. BRINK, STANLEY L. MILLER and CHRISTOPHER P. McKAY / Hydrogen Consumption by Methanogens on the Early Earth 311–319

F. GARCIA-PICHEL / Solar Ultraviolet and the Evolutionary History of Cyanobacteria 321–347

Vol. 28 Nos. 4–6 October 1998

Papers presented at the 1996 ISSOL Meeting in Orléans, France

JAMES P. FERRIS / Commentary v

FARID SALAMA / The Diffuse Interstellar Bands: A Tracer for Organics in the Diffuse Interstellar Medium? 349–364

WILLIAM M. IRVINE / Extraterrestrial Organic Matter: A Review 365–383

MICHEL MAURETTE / Carbonaceous Micrometeorites and the Origin of Life 385–412

KAREN L.F. BRINTON, CÉCILE ENGRAND, DANIEL P. GLAVIN, JEFFREY L. BADA and MICHEL MAURETTE / A Search for Extraterrestrial Amino Acids in Carbonaceous Antarctic Micrometeorites 413–424

S.J. CLEMETT, X.D.F. CHILLIER, S. GILLETTE, R.N. ZARE, M. MAURETTE, C. ENGRAND and G. KURAT / Observation of Indigenous Polycyclic Aromatic Hydrocarbons in 'Giant' Carbonaceous Antarctic Micrometeorites 425–448

JANICE L. BISHOP / Biogenic Catalysis of Soil Formation on Mars? 449–459

ROBERT D. MINARD, PATRICK G. HATCHER, ROBERT C. GOURLEY and CLIFFORD N. MATTHEWS/ Structural Investigations of Hydrogen Cyanide Polymers: New Insights Using TMAH Thermochemolysis/GC-MS 461–473

BERND R.T. SIMONEIT, R.E. SUMMONS and L.L. JAHNKE / Biomarkers as Tracers for Life on Early Earth and Mars 475–483

GÖZEN ERTEM and JAMES P. FERRIS / Formation of RNA Oligomers on Montmorillonite: Site of Catalysis 485–499

DANIEL SEGRÉ, DORON LANCET, ORA KEDEM and YITZHAK PILPEL / Graded Autocatalysis Replication Domain (GARD): Kinetic Analysis of Self-Replication in Mutually Catalytic Sets 501–514

HYMAN HARTMAN / Photosynthesis and the Origin of Life 515–521

V. NORRIS and D.J. RAINE / A Fission-Fusion Origin for Life 523–537

ARTURO BECERRA and ANTONIO LAZCANO / The Role of Gene Duplication in the Evolution of Purine Nucleotide Salvage Pathways 539–553

RENATO FANI, ELENA MORI, ELENA TAMBURINI and ANTONIO LAZCANO / Evolution of the Structure and Chromosomal Distribution of Histidine Biosynthetic Genes 555–570

CARLOS BRIONES, KOSTADIN KOROUTCHEV and RICARDO AMILS / Functional Phylogeny: The Use of the Sensitivity of Ribosomes to Protein Synthesis Inhibitors as a Tool to Study the Evolution of Organisms 571–582

J. CHELA-FLORES / A Search for Extraterrestrial Eukaryotes: Physical and Paleontological Aspects 583–596

FLORENCE RAULIN-CERCEAU, MARIE-CHRISTINE MAUREL and JEAN SCHNEIDER / From Panspermia to Bioastronomy, the Evolution of the Hypothesis of Universal Life 597–612

PIER LUIGI LUISI / About Various Definitions of Life 613–622

Subject Index Volume 28 623–624

Volume Contents Volume 28 625–627